

Theoretical and Experimental Investigation of Asymmetric Coplanar Waveguide

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Conformal mapping techniques are used to obtain analytic closed-form expressions for the characteristic impedance and the relative effective dielectric constant of asymmetric coplanar waveguide with infinite or finite dielectric thickness. The line asymmetry leads to a decrease of its characteristic impedance and to an increase of its relative effective dielectric constant. Six asymmetric coplanar waveguides are raised are their characteristic impedances are measured using time domain reflectometry techniques.

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